

**Amendments to the Title**

Please change the title of the application to "CAST-IN PIPE AND COOLING BLOCK".

**Amendments to the Specification**

At column 2, please amend the paragraph from line 4 through line 12 as shown below:

Prior art cast copper and low-alloy-copper cooling blocks and design engineering have also been commercially supplied and/or designed by ~~Hatch~~ ~~(Mississauga, Canada)~~, Outokumpu OY (Finland), Kvaerner (Stockton, England), Demag (Germany), Hundt & Weber (Siegen, Germany), Tucson Foundry (Tucson, Ariz.), ~~Thomas~~ Thos Begbie (South Africa), Alabama Copper (Alabama), Niagara Bronze (Niagara Falls, Canada), Hoogovens (Netherlands), and others.

At column 7, please amend the paragraph from line 18 through line 20 as shown below:

FIGS. 1A[[,]] and 1B ~~and 1C~~ are end[[,]] and top[[,]] ~~and side~~ projections of a furnace-cooling system embodiment of the present invention;

At column 7, please amend the paragraph from line 33 through line 43 as shown below:

FIGS. 1A-~~1C~~ 1B represent a furnace-cooling system embodiment of the present invention, and is referred to herein by the general reference numeral 100. The furnace-cooling system 100 comprises a pipe 102 bent into a loop and cast inside a cooling block 104. A pair of flanges 106 and 108 allow for mounting of the furnace-cooling system 100 in a foundry furnace crucible. ~~A conical hole 110 provides a secure way to~~

~~mount a refractory casting or brick that lines the~~  
~~inner walls of such crucibles.~~ A pair of pipe fittings  
112 and 114 provide connections for a water-cooling  
circulation system.

At column 9, please amend the paragraph from line 52 through line 67 as shown below:

FIGS. 4A-4D illustrate a cooling block embodiment  
of the present invention, and is referred to herein by  
the general reference numeral 400. The cooling block  
400 includes a hot-face 402 opposite to a plumbing  
face 404. A pair of UNS C71500 copper-nickel alloy  
pipes 406 and 407 are fitted with respective pipe  
couplings 408-411. The pipes 406 and 407 are cast  
inside a solid-copper block 412. ~~FIGS. 4A-4D show a~~  
~~typical pattern. A system of vertical grooves 414,~~  
~~horizontal grooves 416, and pockets 418 at the~~  
~~intersections are included in the hot face 402. Such~~  
~~provide sites to retain refractory and/or frozen bath~~  
~~material. The use of any of the vertical grooves 414,~~  
~~horizontal grooves 416, and pockets 418, as well as~~  
~~their shapes and placement are a matter of engineering~~  
~~choice made for each particular application.~~ The  
fabrication of the cooling block 400 is similar to the  
furnace-cooling system 100 of FIG. 1.

At column 9, before line 52, please insert the following new paragraph:

In accordance with another embodiment, the pipe 102 may be formed of a copper-nickel alloy constituted from at least 60%-Wt copper. In another embodiment, the cooling block 104 may be cast with a copper alloy constituted from at least 50%-Wt copper.